STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR POLLUTION CONTROL

Director's Review and Preliminary Determination of Permit Issuance
for
Sierra Pacific Resources Company
Ely Energy Center
October 29, 2007

Sierra Pacific Resources Company (SPRC) has submitted an application for a new Class 1 Operating Permit to Construct (OPTC) to the Nevada Division of Environmental Protection - Bureau of Air Pollution Control (NDEP-BAPC). The Prevention of Significant Deterioration (PSD) Permit application was submitted on February 7, 2007 and deemed complete on March 10, 2007. The facility is proposed to be located on property approximately thirty miles north of Ely, Nevada, in White Pine County. A map of the location of the EEC facility is located in Figure 1 below.

The NDEP-BAPC has reviewed the application and has made a preliminary determination to issue the Class I Operating Permit to Construct. The facility wide potential to emit for the SPRC Ely Energy Center is provided below.

Proposed emission estimates indicate that the SPRC plant will be a Major Stationary Source because emissions of NSR regulated pollutants are greater than 100 tons per year (tpy).

Facility-Wide Potential to Emit		
Pollutant		**TPY**
PM	(Particulate Matter)	1,788
PM_{10}	(Particulate matter <10 microns in diameter)	1,788
NO_x	(Oxides of Nitrogen)	4,853
CO	(Carbon monoxide)	7,720
VOC	(Volatile Organic Compounds)	285
SO_2	(Sulfur Dioxide)	4,628
HAPs (all)	(Hazardous Air Pollutants)	922
H_2SO_4 Mist	(Sulfuric Acid Mist)	305

SPRC is required to submit a Best Achievable Control Technology (BACT) analysis as part of their PSD application. SPRC has conducted a BACT analysis, using the top-down approach, for each of the pollutants identified as being above the PSD significance thresholds. A top-down BACT analysis consists of the following:

- Identification of the available control technologies;
- Elimination of the technically infeasible control options;
- Ranking of the remaining control technologies in order from the most effective to the least effective;
- Evaluation of the most effective control option for economic, energy and environmental impacts, and if it is not eliminated on these impacts, acceptance of the technology as BACT; if not, evaluate the next most effective control option in the ranking; and
- Selection of the most effective control option not eliminated for economic or environmental impacts.

A summary of SPRC's BACT analysis is included in the Table 1 below. NDEP-BAPC concurs with SPRC's analysis. Table 1 is a summary of each emission unit, pollutant, and selected BACT for each unit requiring a BACT analysis.

FIGURE 1: LOCATION OF THE EEC FACILITY

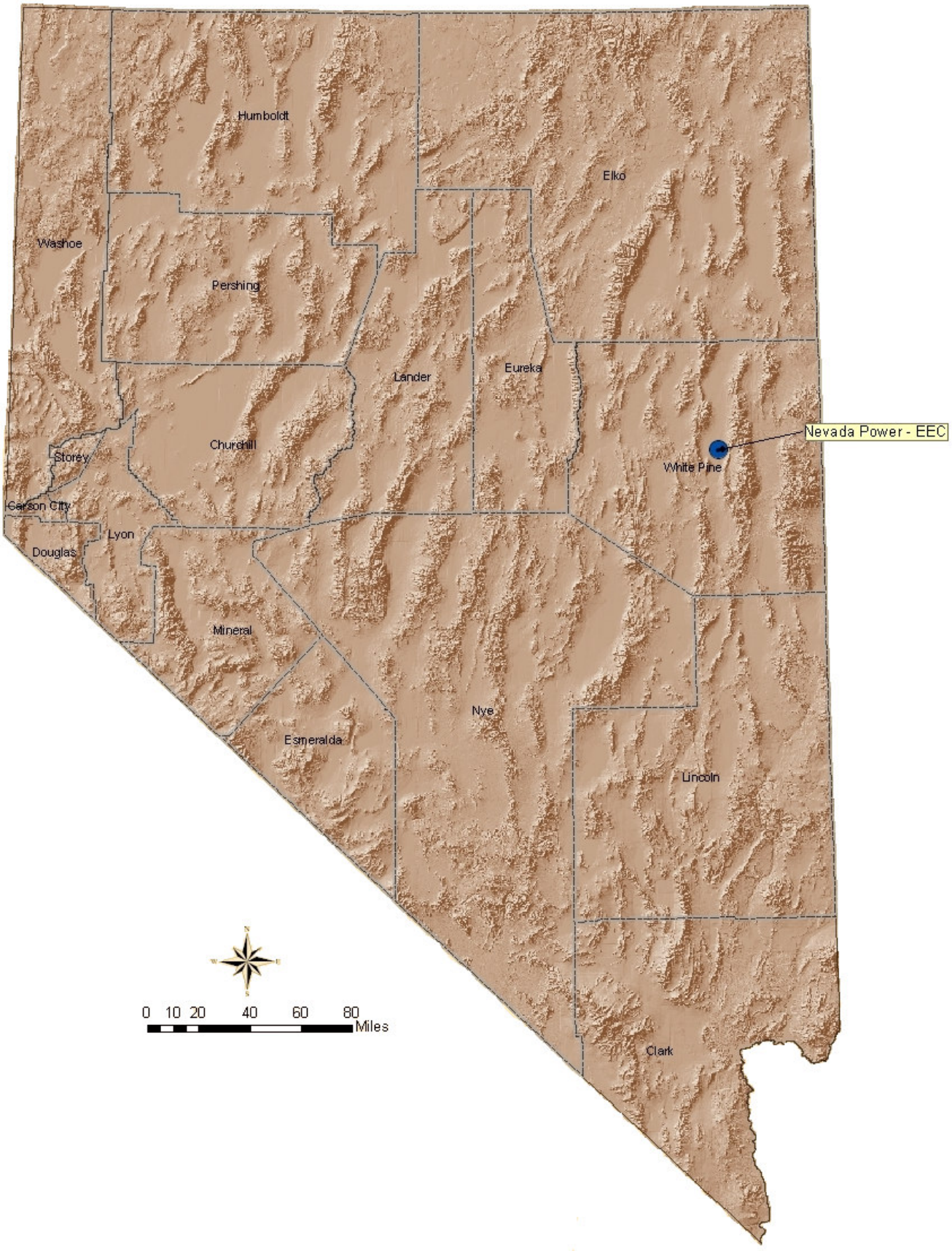

TABLE 1: SUMMARY OF EMISSION UNITS AND BACT LIMITS/CONTROLS

Process	Pollutant	Proposed Emission Limit (lb/MMBtu)	Control Technology
PC Boilers	NO_x	0.06 (24-hr Average)	LNB, OFA, and SCR
	SO_2	0.06 (24-hr Average)	Wet scrubber
	H_2SO_4	0.004	Wet scrubber – Fabric filter
	CO	0.1	Combustion controls
	VOC	0.0035	Combustion controls
	PM/PM_{10}	0.01 (Filterable PM_{10}, 24-hr Average) 0.02 (Filterable and Condensable PM_{10}, 24-hr Average) (Opacity = 10%)	Fabric filter
	Lead	2.59E-05	Fabric filter
	HF	0.0004	Wet scrubber – Fabric filter
Auxiliary Boiler	NO_x	0.1	LNB
	SO_2	0.05	Limit fuel sulfur to < 0.0015%
	H_2SO_4	--	Limit fuel sulfur to < 0.0015%
	CO	0.036	Combustion controls
	VOC	0.0018	Combustion controls
	PM/PM_{10}	0.01 (Filterable) 0.01 (Condensable) (Opacity = 20%)	Low-ash fuel
Diesel Engine Generator/Fire Water Pump/FGD back up pumps	SO_2	--	Limit fuel sulfur to < 0.0015%
	H_2SO_4	--	Limit fuel sulfur to < 0.0015%
	NMHC and NO_x	Generator: 37.0 lb/hr Fire Water Pump: 7.3 lb/hr	Combustion controls
	CO	Generator: 23.1 lb/hr Fire Water Pump: 4.5 lb/hr	Combustion controls
	VOC	Included in NMHC and NO_x	Combustion controls
	PM/PM_{10}	Generator: 1.3 lb/hr (total) Fire Water Pump: 0.3 lb/hr (total)	Low-ash fuel
Material Handling and Storage Facilities	PM/PM_{10}	0.005 grains/dscf	Dust collectors, partial enclosures, telescoping chutes, and wet suppression (fog), pile compaction and contouring
Cooling Towers	PM/PM_{10}	0.0005% of circulation rate	Drift eliminators

Notes:

-- = Not applicable
BACT = Best available control technology
CO = Carbon monoxide
hr = Hour
dscf = Dry standard cubic foot
FGD = Flue gas desulfurization
H_2SO_4 = Sulfuric acid
HF = Hydrogen fluoride
lb = Pound
LNB = Low NO_x burners
NMHC = Non-methane hydrocarbon
NOx = Nitrogen oxides
OFA = Over fire air
PM = Particulate matter
PM_{10} = Particulate matter with an aerodynamic diameter less than 10 micrometers
SCR = Selective catalytic reduction
SO_2 = Sulfur dioxide
VOC = Volatile organic compound
MMBtu = Million British thermal units

The proposed project is to be located in Hydrographic Basin 179. The PSD minor source baseline date for Hydrographic Basin 179 is June 4, 1979, for PM_{10} and December 28, 2006, for NO_x. Hydrographic Basin 179 has been split into a North, Middle, and South for the purpose of SO_2 Increment. The North Steptoe Valley PSD minor source baseline date for SO_2 is November 28, 1984. The Middle Steptoe Valley PSD minor source baseline date for SO_2 is December 28, 2006. Modeling completed to evaluate PSD increment consumption was accomplished by adding nearby source impacts to the EEC impacts. Because a baseline inventory has not yet been completed for the region in which EEC is located, all emission sources were conservatively assumed to be PSD increment consuming and were included in the PSD increment consumption analysis. For this proposed facility, two ambient air impact studies were required: one to demonstrate compliance with the Nevada Ambient Air Quality Standards (NAAQS), and one to demonstrate compliance with the allowable Increment.

The air quality analyses demonstrate that the emissions from the proposed processes will not cause or contribute to a violation of any applicable federal or state ambient air quality standard. Pursuant to the Federal PSD provisions, the project must employ the Best Available Control Technology (BACT) for emissions controls. After review of the application and air quality analysis, the NDEP-BAPC has determined that the proposed project may be constructed and operated without an adverse impact on air quality, will not cause or contribute to an increment exceedence, and shows no adverse impact on a Class I area.

The significant impact analysis showed that maximum CO concentrations are below modeling significance levels for the EEC sources; therefore, operation of the EEC sources will not significantly impact ambient concentrations. The results of the full impact analysis for NAAQS evaluation, from the proposed SPRC facility, are summarized in the table below.

TABLE 2: SUMMARY OF FULL IMPACT ANALYSIS FOR NAAQS EVALUATION

Pollutant	Averaging Period	Cumulative Highest Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Concentration ($\mu g/m^3$)	Nevada AAQS[(a)] ($\mu g/m^3$)
NO_2	Annual	5.2[(b)(c)]	3.7	8.9	100
SO_2	3 hours	176[(c)]	4.0	180	1,300
	24 hours	34.0[(c)]	3.0	37.0	365
	Annual	6.9[(c)]	3.0	9.9	80
PM_{10}	24 hours	31.9[(c)(d)]	19.0	50.9	150
	Annual	9.4[(c)(d)]	7.0	16.5	50
Lead	Monthly	0.00059[(e)]	NA	0.00059	1.5
O_3	1 hour	57.7[(e)(f)]	167	225	235

Notes:

a National and Nevada AAQS are identical in magnitude. Short-term national standards allow one exceedance per calendar year. Short term values are 1st-highest in accordance with NDEP policy.

b The NO_x to NO_2 conversion factor of 0.75 was applied.

c The receptor exhibiting maximum impact for this averaging period was directly adjacent to (and possibly within) the Nevada Slag site and did not exhibit a significant contribution from the EEC facility. It was therefore not included in the results.

d Cumulative modeling concentrations are within the Significant Impact Area (12,432 m from the main stack).

e From EEC sources only

f High-second-high concentration in accordance with National AAQS.

The results of the full impact analysis from NO_2, PM_{10} and SO_2 for PSD Increment Consumption evaluation is summarized in the table below.

TABLE 3: SUMMARY OF THE FULL IMPACT ANALYSIS FOR PSD INCREMENT CONSUMPTION

Pollutant	Averaging Period	Cumulative PSD Increment Consumption ($\mu g/m^3$)[(a)]	PSD Increment ($\mu g/m^3$)
NO_2	Annual	5.2[(b)(c)]	25
SO_2	3 hours	94.4[(c)]	512
	24 hours	27.4[(c)]	91
	Annual	6.9[(c)]	20
PM_{10}	24 hours	25.8[(c)(d)]	30
	Annual	9.4[(c)(d)]	17

Notes:

a Value represents the highest modeled impact within the significant impact area and outside the EEC fence line (second highest value for short-term averages)

b The NO_x to NO_2 conversion factor of 0.75 was applied.

c The receptor exhibiting maximum impact for this averaging period was directly adjacent to (and possibly within) the Nevada Slag site and did not exhibit a significant contribution from the EEC facility. It was therefore not included in the results.

d Cumulative modeling concentrations are within the Significant Impact Area (12,432 m from the main stack).